Teaching Aptitude

* Advance Organizer Model

- Given by David Ausubel
- This model is designed to strengthen students cognitive structure
- In this model teacher plays the role of organizer of subject matter and presents information through lectures, readings and providing tasks to the learner.
- Advance Organizers provide concepts and principles to the students directly.

Phase	Outline	Activity
Phase One	Presentation of Advance Organizer	Clarify aims of the lesson. Present organizer:- Identify defining attributes Give examples Provide context Repeat Prompt awareness of learner's relevant knowledge and experience
Phase two	Presentation of learning Task or material	Present Material. Maintain attention Make organization explicit Make logical order of learning material explicit
Phase three	Strengthening Cognitive Organization	Use principles of integrative reconcialiation Promote active reception learning Elicit critical approach to subject matter. Clarify

* Differentiated Instruction (DI)

- It is a proactive and a dynamic method of teaching.
- The teacher uses plans, and other various ways to teach learning.
- It is a combination of whole group, Small group, and individual instruction methods.
- It is a student-centred, a method with uses more qualitative aspects of teaching.

* Blended Learning

- Blended learning combines online learning with face-to-face learning.
- Self-paced, collaborative or inquiry-based study
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* Emphathic Listening:

- The practice of being attentive and responsive to others' input during conversation, trying to understand the other person.

* Mind Mapping:

- Developed by Tony Buzan in 1960.
- A 'mind map' is a diagram for representing tasks, words, concepts or items linked to and arranged around a central concept or subject

• Using mind maps an an innovative thinking tool in education helps students to visualize and externalise concepts and understand the connections between different ideas.

* World Braille Day - January 04
National Girl Child Day also called as Balika Divas - January 24.
November 11 - National Education Day
September 14 - Hindi Day
September 8 - International Literacy Day

* The classification of cognitive domain was given by Benjamin Bloom.

* Six major levels of Bloom's Taxonomy of the Cognitive Domain -
1. Knowledge - Remembering Information
2. Comprehension - Explaining the meaning of information
3. Application - Using abstractions in concrete situations.
4. Analysis - Breaking down a whole into component parts.
5. Synthesis - Putting parts together to form a new and integrated whole
6. Evaluation - Making judgements

Research Aptitude

1. The personalistic styles of writing a research report are permissible in -
   - Grounded theory research
   - Participant-observation based research
   - Case study research.

- Grounded theory is a systematic methodology that has been largely applied to qualitative research conducted by social scientists.
- The methodology involves the construction of hypotheses and theories through the collection and analysis of data.
- Grounded theory involves the application of inductive reasoning.

2. Using an appropriate parametric test in a research project, the researcher finds evidence to reject the Null hypothesis. In doing so, which type of error is likely?
   - Alpha error.

The statistical error made in testing a hypothesis when it is concluded that a result is positive, but is really not. Also known as false positive.

3. Qualitative research is an umbrella term to refer to various research strategies that share certain characteristics.

4. Correlational Studies:
It is undertaken to discover or establish relationship or interdependence between two aspects of a situation.

5. Factor Analysis-
• Factor Analysis allows researchers to describe many variables using few factors, thus reducing the number of variables to a manageable level in terms of factors.

6. Explanatory hypothesis:
• It guides about the cause-and-effect relationship between two variables.

7. Structured surveys-
Uses formal lists of questions to be asked from all respondents in the same manner.
Unstructured surveys-
They give the interviewer to probe respondents and direct the interview according to their answers.

8. Ethical Issues Relating to the Researcher:

1. **Fabricating behaviour:**
Fabrication is "making up data or results."
Falsification is "manipulating research materials, equipment or processes, or changing or omitting data or results such that the research is not accurately represented in the research record."

2. **Avoiding bias:**
Objectivity in research means to avoid bias in the research process as it is considered unethical. Bias means deliberate attempt to either hide facts or to under represent or over represent them. It may undermine the truth.

3. **Plagiarism:**
Is the act of appropriating somebody else's ideas, thoughts, original work etc. as your own.

Intra-corpal: A case of plagiarism where one student has copied from another in the same submission is known as intra-corpal plagiarism.

Extra-corpal:
It happens when the scholar copies the material

from an external source (eg: article, book, internet etc)

Autoplagiarism: It is citing one own's work without acknowledgement.

4. Duplicate or partial publication:
It is publishing the same data and same results in more than one publication or journal.

9.) Symposium:
A formal meeting at which specialists deliver Short addresses on a topic or on related topics and then answer the questions relating to these topics.

Colloquium:
It is usually an academic meeting at which deliver addresses on a topic or on related topics and then answer the questions to a well-educated but not specialized audience

1. <u>Norm-Referenced Test:</u>

- Used to measure - General language abilities or proficiencies.
- Purpose of testing - Spread students out as per their needs and help differentiate student's abilities.
- Normal distribution
- It ranks and compares students in relation to one another.

2. <u>Criterion-Referenced Test:</u>

- These tests and assessments are designed to measure student performance against a fixed set of predetermined criteria or learning standards

3. <u>Experimental research</u> determines a cause and effect relationship between two variables. By manipulating independent variable and isolating the other variable, the researcher can find with confidence that independent variable is cause of dependent variable which is outcome of research.

- <u>Descriptive survey</u> is about description of past and present situation
- <u>Ethnography</u> is based on culture and identifies behavior of participants gaining information about them.

Communication

1. **Types of Feedback in Classroom-**
   - Negative Feedback- is given when learner's behaviour was not successful and shouldn't be repeated.
   - Positive Feedback- Affirming comments about past behaviour. It's given when learner's behaviour was successful and should be continued.
   - Negative feed-forward- corrective comments about which type of actions can be taken to increase future performance
   - Positive feed-forward- Affirming comments about future behaviour.

2. Gatekeeping is the process through which information is filtered for dissemination, whether for publication, broadcasting, the Internet, or some other mode of communication
   The theory was first instituted by social psychologist Kurt Lewin in 1943.

3. **The Hawthorne Effect :**
   When people are aware that they are being observed as part of a study, they will perform better or worse than expected.

4. Communication can be categorised as- on the basis of involvement of parties-

- intrapersonal (reading a newspaper, meditation, introspection)
- Interpersonal (conversation with a collegue)
- apersonal (use of mass media, publicity, advertisement)

5. Chain network follows a formal chain of command, wherein the members communicate with each other in a pre-planned sequence

6. Paraphrasing:

- Is crucial for good listening.
- It means stating in your own words, your understanding of what has just been said.

7. Analog mass communication-

- Is the one way process of transferring message to the receiver, or audience
- Here the audience is large so they utilize analog media which was originally used in audio recording. Information is sent from Point A to point B.

Logical Reasoning

1. Sequential order of comprehensible sentence is
   1) akanksa (expectancy)
   2) Yogyata (competency)
   3) Sannidhi (proximity) and
   4) tatparya (intention)

2. Paniniji wrote a book on grammar called 'Ashtaadhyaayi' which has 8 chapters.

3. Sruti is direct knowledge which means to hear
   Smriti is indirect knowledge that which is remembered.

4. Five events in Buddha's life and their symbols:
   1. Birth - Lotus and Bull
   2. Great renunciation - Horse
   3. Nirvana - Bodhi tree
   4. First sermon - Dharma Chakra
   5. Parinirvana - Stupa

5. Rigveda - Considered as first source of all Knowledge and wisdom
   Yajurveda - provides procedure for various Ceremonies and rituals.

Hetvabhasa (Fallacies of Inference)

Hetvabhasa means fallacy in English language. Fallacy is a false or mistaken idea. A fallacy is the use of invalid or otherwise faulty reasoning or 'wrong moves' in an arguement construction. It means that middle term appears to be a reason but is not a valid reason.

Fallacies are generally of 2 types:

- Formal fallacy - refers to arguements that have an invalid structure or form.
- Informal fallacy - refers to the arguements that have incorrect or irrelevant premises.

Five kinds of formal fallacies:

Types	Description	Example
Assiddha or Sadhyasama	This is the fallacy of unproved middle	Sky-lotus is fragnant, because its a lotus, like the lotus of pond
Savyabhicara	This is the fallacy of irregular middle	Sound is eternal because it is audible
Satpratipaksa	Here the middle term is contradicted by another middle term	Sound is eternal, because it is audible & sound is non eternal because it is produced
Badhita	It is the non-inferentially contradicted middle	Fire is cold because it is a substance
Viruddha	It is the contradictory middle	Sound is eternal, because it is produced

Informal fallacies:

1. **Ad Poplulum or Argumentum ad Populum (Appeal to the people):**
   - It is a fallacious arguement that concludes that a proposition must be true because many or most people believe it.

2. **The fallacy of composition:**
   It arises when one infers that something is true of the whole from the fact that it is true of some part of the whole.
   - What's true of the parts must be true of the whole.

3. **Fallacy of Division:**
   - It is a fallacy of induction that occurs when someone assumes that what is true of a whole, must be true of the parts.

4. **Petition Principii (Begging the question):**
   - This fallacy is also known as a circular arguement and it occurs where the conclusion is assumed in any one of the premises.

ICT.

1. Joint Photographic Experts Group (JPEG) is used to compress Image.

2. Koha - The world's first free and open source library system
BigBlueBotton - is a free, open-source for web conferencing system for online education

3. A logic bomb is a malicious program that is triggered when a logical condition is met. Malware such as worms often contain logic bombs, behaving in one manner, then changing tactics on a specific date and time.

4. Parity checking is the most basic method of detecting and repairing errors.

5. The Post Office protocol is -
Protocol used when receiving emails from the email server.

6. mooKIT platform uses DRUPAL, an open Source content management system

7. Media Kits are used in External Communication

8. National Programme on Technology Enhanced Learning (NPTEL):

- Joint initiative of the IITs and IISc to provide e-learning through web online and video courses in engineering, science, and humanities streams aim to provide quality education via free courses.

9. GRID GARUDA:

- It is India's first national grid bringing together academic, scientific and research communities for developing their data and other applications. It is connected with National Knowledge Network (NKN)

10. Prasar Bharati:

- India's public broadcaster headquartered in New Delhi.
- It is a statutory autonomous body set up by an Act of Parliament and comprises the Doordarshan Television Network and All India Radio in order to educate and entertain the public

11. Trivial File Transfer Protocol (TFTP):

This protocol allows transferring of files between the network devices.

People and Environment

1. The transitional area between two ecosystems is known as an <u>ecotone</u>.
   - An <u>ecotone</u> is a transition area between two biological communities, where two communities meet and integrate.

2. <u>Carbon Monoxide (CO)</u> –
   This odorless, colorless and poisonous gas is formed by the combustion of fossil fuels such as gasoline and is emitted primarily from cars and trucks.

3. <u>Ecological Footprint</u>:
   - The ecological foot-print measures human consumption of natural resources in comparison to Earth's ecological capacity to generate them.

4. <u>Abiotic Components</u>:
   In ecology, abiotic components are non-living chemical and physical factors in the environment that affect the ecosystems.
   Eg: water, light, wind, soil etc.

5. <u>Biotic Components</u>:
   Living components in an ecosystem are either

producers or the consumers. They are also called the biotic components.

6. The concept of ecological pyramid was developed by Charles Elton.
The trophic levels form a pyramid, with producers at the bottom, then primary consumers (herbivores), secondary consumers (carnivores and tertiary carnivores)

7. Biomes:
The terrestrial portion of biosphere is divided into biomes. They usually have distinct climates and life forms adapted to that climate. Desserts, grasslands, tropical forests, and rain forests are the main examples of biomes.

8. Modified Mercalli Scale:
It expresses the intensity of earthquake's effect on people, structure, and the earth's surface on scale.

9. Nuclear fusion reaction:
It involves the combination or fusion of two light elements such as hydrogen to form a heavier element, resulting in the release of uncontrollable energy.

Higher Education System

1) **Finance Commission :-**

- It is set up under Article 280 of the constitution.
- It is constituted by the President, once in every five years.
- Its main function is to recommend about the
  i) distribution of financial resources between the centre and the states and also among the states themselves,
  ii) the principles which govern the grants-in-aid of the revenues amongst the states out of the consolidated fund of India.

2) **Election Commission:**

- The constitution provides for an independent election commission to ensure free and fair elections.
- Election Commission consists of a Chief Election Commissioner and such other commissioners as the President may decide from time to time.
- To lay down general rules for elections.

3) **Union Budget:**

- The budget is the annual financial statement of the government.
- It is a government bill and is classified as a

a money Bill.

- The budget is a statement of the estimated receipts and expenditures of the govt. of India for the following financial year.

4) Consolidated Fund of India:

- It is a fund to which all the revenue, loans raised and income of the Govt. of India are deposited.
- Charged expenditures are expenditures that do not require the approval of the Parliament.

5) Comptroller and Auditor General of India:

- Is appointed by the President.
- He holds office until the age of 65 years or at the expiry of six-year term, whichever is earlier.
- He is the guardian of the public purse.
- His duties are to keep the accounts of the union and the states.

6) India has no official language. The official language of ~~Indi~~ the union govt of Republic of India is Hindi, while English is the secondary official language.

Current Affairs

1. Ministry of Labour & Employment releases the 'Quarterly Employment Survey (QES)'?

2. Author Mentorship is the objective of the YUVA programme, launched by the PM recently.

   YUVA: Prime Minister's Scheme for Mentoring Young Authors.

3. SIDBI has launched two quick credit delivery schemes named 'SHWAS' and 'AROG', to help MSME augmentation.

4. UDID - Unique Disability ID
   Unique ID for Persons with Disabilities

5. "Mahtari Dular Yojna" scheme has been launched by Chattisgarh.

6. World Music Day - June 21

7. Asiatic Lion animal species recorded an increase by nearly 29%, as per a report from the forest department.

8. The 'Task Force on Blue Economy for Sustainable Development' is a collaboration between India and Norway.

9. Reserve Bank of India releases the 'Report on Currency and Finance CRCF)'?

10. 150 is the rank of India in the 'RSF 2022 World Press Freedom Index'

11. Poland is the venue of the 11th World Urban Forum held in 2022

12. In the PSLV-C53 mission, ISRO launched three satellites of Singapore

13. The 'e-Sanjeevani' facility is set to be launched at Ayushman Bharat-Health and Wellness Centres to ensure coverage in remote areas.

14. Swadesh Darshan scheme is the initiative of Ministry of Tourism

15. 'Rural Tribal Technical Training Program' (Grameen Udhyami Project)' was launched in Bhopal.

16. Ministry of Housing and Urban Affairs launched 'BHARAT TAP' initiative

17. Madhya Pradesh launched the 'Ladli Laxmi Scheme 2.0.'

18. Mission Raftaar is associated with Indian Railways

19. SBI is the only institution in India to issue 'Electoral bonds'.

20. Employment Generation is the objective of the new initiative SWADES, [Skilled Workers Arrival Database for Employment Support]

21. NITI Aayog recently released compendium of Ayush practices to manage COVID-19.

22) Bhaskaracharya Institute of Space Applications and Geoinformatics (BISAG) is in Gujarat.

23) Implementing agency of 'Prime Minister Employment Generation Programme (PMEGP) - Khadi and Village Industries Commission

Current Affairs

24) PM e-Vidya recently launched by the Indian Government, with an aim to promote digital education in the country

25) Intel collaborated with CBSE and Ministry of Education for 'AI for All' initiative.

26) Google launched 'Startup School India (SSI)' initiative

27) Bonn, Germany is the host of '2022 Global biodiversity conclave'?

28) Indiastack.global is the name of the single repository of all Indian government's digital projects, to be shared with the world

29) 'Convention for the Safeguarding of the Intangible Cultural Heritage [ICH]' is associated with UNESCO
[United Nations Educational, Scientific and Cultural Organization]

30) The Electronic Vaccine Intelligence Network (eVIN) is being implemented under National Health Mission.

31) 'HOPE' - Helping Out People Everywhere, portal is an initiative of Uttarakhand.

32) The National Maritime Day is celebrated on April 5, to commemorate the maiden voyage of SS Loyalty, that was wholly owned by India.

33) January 24 is the International Day of Education

34) Central Bureau of Communication was earlier known as Bureau of Outreach and Communication.

35) Ministry of Parliamentary Affairs is the nodal ministry for the implementation of e-Vidhan project under the Digital India programme

36) Ministry of Electronics and IT along with Atal Innovation Mission has launched "Digital India AatmaNirbhar Bharat App Innovation challenge."

37) Ministry of Women and Child Development' implements the 'Mission Shakti' scheme

38) Sankalp Parva is the tree planting campaign recently launched by Union Culture Ministry

39) Ministry of Housing and Urban Affairs has launched the revised version of Swachhata App to handle queries specific to COVI9-19

40) IIT Madras was ranked first in the National Institutional Ranking Framework (NIRF) 2022

41) July 17 is the 'World Day for International Justice.'

42) Rajasthan has launched first AI-powered digital Lok Adalat.

43) New Delhi has launched 'Mukhya Mantri Ghar Ghar Ration Yojna'

44) Draupadi Murmu has been selected as the 15th President of India.

45) Karnataka is ranked first in the NITI Aayog's India Innovation Index (2021)

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Current Affairs

1. PayNow, with which India has announced the linking of the Unified Payments Interface (UPI), is a payment interface of which country?
Ans. Singapore.

2. Union Cabinet has approved PLI scheme (Production Linked Incentive Scheme) for which sector?
Ans. Auto Sector and drone Industry.

3. Which nation hosted the 2021 SCO summit in a hybrid mode?
Ans. Tajikistan

4. Which state launched Millet Mission with the aim of becoming the millet hub of India?
Ans. Chattisgarh.

5. In which city, PM Modi has laid foundation stone of Raja Mahendra Pratap Singh University?
Ans. Aligarh.

6. Which organisation has launched "Project Udaan" on the occasion of Hindi Diwas?
Ans. IIT Bombay.

7. When is World Ozone Day 2021 Observed?
Ans. September 16th.

8. With which organization, NITI Aayog has partnered to launch 'Shoonya' campaign for zero-pollution delivery vehicles.
Ans. Rocky Mountain Institute

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27) World Teachers' Day - October 5.

28) Winner of the 2021 Nobel Prize for Medicine - David Julius and Ardem Patapoutian.

29) What are 'Pandora Papers'?
Ans. Documents revealing undisclosed wealth and tax avoidance.

30) 'MITRA' Scheme announced in Budget 2021-22 is associated with Textile Sector.

31) Indian Railways has launched the initiative named "Meri Saheli"

32) Param Siddhi - name of India's Super computer, which is placed among the top 500 world's most powerful non-distributed computer systems.

33) Theme of the India International Science Festival 20
- Science for Self-Reliant India and Global Welfare.

34) CIPET : Institute of Petrochemicals Technology has been inaugurated in Jaipur.

35) Artificial Intelligence and Machine Learning has been introduced recently in which portal of MSME ministry?
Ans. CHAMPIONS.

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36) Digital Platform launched by the Centre for holist and integrated infrastructure development to provide multi-modal connectivity to economic zones in the country – PM Gati Shakti

37) 'Kisan Suryodaya Yojna' is implemented in Gujara

38) Name of the Campaign launched by Union Minis of Textiles, for Diwali 2020 – Local 4 Diwali

39) Which state government has launched 'Dharani' Portal for land & property registrations?
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Ans. Telangana.

40) India has been ranked at which position in the Global Food Security Index (GFSI) 2021?
Ans. 71st.

41) Which country has topped the Global Food Security Index (GFSI) 2021 – Ireland.

42) Which Union ministry launched 'Development of Wind Parks/Wind-Solar Hybrid Park?'
Ans. Ministry of New and Renewable Energy.

43) Name of India's doctrine of Maritime cooperation in the Indian Ocean region?
Ans. SAGAR.

44) Govt. agency UIDAI is hosting a Hackathon titled "Aadhaar Hackathon 2021". What is full form of UIDA
Ans. Unique Identification Authority of India.

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17) Which ministry in association with UGC has organ
a Webinar on "Ensuring Inclusive Governance:
Making Every Person Matter?"

Ans: Ministry of Education

18) Who has been conferred with the 2021 Global
Goalkeeper Award by the Bill & Melinda Gates
Foundation?

Ans. Phumzile Mlambo-Ngcuka.

19) Which entity operates "Digital Sky" Platform in In
Ans. Directorate General of Civil Aviation

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20) Name of the tourism app recently launched by
the Delhi Govt - Dekho meri Dilli

21) 'National Institute of Biotic Streos Tolerance' is
located in Raipur.

22) World Maritime Day 2021 - Sep 30th.

23) Amazon has launched 'Future Engineer Program
in India.

24) 'Clean India Programme' has been inaugurated
from which state - Bihar.

25) 'Central Institute of Fisheries Technology' is
located in Kerala.

26) DigiSaksham programme, which was making ne
recently, was launched by which Union ministry
Ans. Ministry of Labour and Employment.

9) Which organization has launched a report titled 'Reforms in Urban Planning Capacity in India?'
Ans. NITI Aayog

10) Which organization has launched the Planetarium Innovation Challenge?
Ans. MyGov India.

11) Who chaired the 13th BRICS Summit Virtually?
Ans PM Modi.

12) World Bamboo Day - 18th September.

13) India's 61st Software Technology Park centre opened in Nagaland. @ugcnet_notes

14) With which org, NITI Aayog has partnered to provide free access to education to students in 112 Aspirational Districts in India?
Ans. BYJU

15) Which state has inaugurated South Asia's largest Product Development centre 'Digital Hub', to support Start-ups?
Ans. Kerala.

16) "Aadhaar Based e-KYC", "self KYC" and 'OTP based conversion' are a part of which reforms initiated by the Govt. of India?
Ans. Telecom Reforms.

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45) Parambikulam Tiger Conservation Foundation has won the Earth Guardian Award. Where is it located?

Ans. Kerala.

46) Konkan Shakti 2021 is the first-ever tri-services joint exercise between India and which country?

Ans. UK.

47) Rajnikanth has been honoured with the 51st Dadasaheb Phalke Award.

48) Which nation will host the 16th G20 Summit?

Ans. Italy, City-Rome

49) What is the name of India's first indigenous aircraft carrier?

Ans. INS Vikrant.

50) Who has won the German Peace Prize 2021?

Ans. Tsitsi Dangarembga.

51) Which Union ministry launched the 'Green Day Ahead market (GDAM)?'

Ans. Ministry of New and Renewable Energy.

52) What is Facebook's new name?

Ans. Meta.

53) Which state govt. decided to start world's largest floating solar project by 2023?

Ans. Madhya Pradesh.

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54) Which state has topped the State Energy Efficiency Index (SEEI) 2020?

Ans. Karnataka.

55) Which state inaugrated India's largest aromat garden?

Ans Uttarakhand.

56) Mullaperiyar dam, located in Kerala, is in control of which state?

Ans. Tamil Nadu.

57) Which country will host Conference of Parties (COP-26) on climate change?

Ans. UK.

58) Which Union ministry launched the 'Deep Dive On Training program?

Ans. Ministry of Electronics and IT.

59) The term 128-bit era refers to Video Games Co

60) E-Granthalaya is an Integrated Library Management Software developed by National Informatics Centre (NIC), Department of Electronics & Information Technology.